

# Sail-a-Plane



The Sail-a-Plane multi-mode autonomous vehicle is a concept for a platform that operates as an aircraft for high-speed deployment and as a sailboat for long endurance operation at sea. Its lifting surfaces will act as wings while in flight and as sails while on the water. Operating as an airplane it will draw propulsive power from onboard batteries, and, as a sailboat, draw propulsive power from the wind. To provide control and sensing power while configured as a sailboat, the Sail-a-Plane will have some surfaces covered with photovoltaic cells that will recharge the vehicle's batteries. After a sufficient recharge time, the vehicle could convert back to an airplane and take off from the water on hydrofoils.

Sail-a-Plane could be applicable to a range of different sizes and missions, such as maritime surveillance, anti-submarine warfare, electronic intelligence gathering, and oceanographic or meteorological research. Its sailing ability will allow it to maintain station in a specified area or to follow a search pattern, despite the effects of wind and currents. It will therefore be more versatile than a fixed or floating buoy. It could also move to a new location as the source of interest moves, or return to base.

**For additional information, please contact:**



James Kellogg  
Naval Research Laboratory  
Code 5712  
4555 Overlook Ave, SW  
Washington, DC 20375  
202-404-7625 voice, 202-767-6194 fax  
[kellogg@suzie.nrl.navy.mil](mailto:kellogg@suzie.nrl.navy.mil)

